

REMARKS

Applicants thank the Examiner for the detailed Office Action dated 10 April 2007. Applicants respectfully request reconsideration of the present application in view of the reasons that follow.

Claims 1-33, 37-40, and 42-52 were pending in the application. Claims 1, 5-6, 11, 14-15, 19, 25, 28-31, 37, 42-43, 45, 47-48, and 50-51 are currently being amended. Claims 53-55 are being added. After amending the claims as set forth above, claims 1-33, 37-40, and 42-55 remain pending in this application.

For simplicity and clarity purposes in responding to the Office Action, Applicants' remarks are primarily focused on the rejections of the independent claims (*i.e.*, claims 1, 15, 25, 28, 31, 37, 42, 43, 45, and 47) outlined in the Office Action with the understanding that the claims that depend from the independent claims are patentable for at least the same reasons (and in most cases other reasons) that the independent claims are patentable. Applicants expressly reserve the right to argue the patentability of the dependent claims separately in any future proceedings.

Claim Rejections – 35 U.S.C. § 102***Independent Claims 1, 15, and 47 in view of Nash et al.***

On page 2 of the Office Action, independent claims 1, 15, and 47 and various dependent claims were rejected under 35 U.S.C. § 102(b) as being unpatentable over U.S. Patent No. 5,662,681 (Nash et al.). Applicants respectfully traverse the rejection. Nash et al. does not identically disclose the subject matter recited in independent claims 1, 15, or 47.

Claim 1, as amended, recites, among other things, that “the filament passes through one hole in the sealing plug to a hole in the anchor and back through another hole in the sealing plug, wherein the one hole in the sealing plug is the last hole in the sealing plug that the filament passes through before entering the hole in the anchor and the another hole in the sealing plug is

the first hole in the sealing plug that the filament passes through after exiting the hole in the anchor.” The device shown in Nash et al. does not meet these limitations because the filament shown in Nash et al. passes out of and returns back through the same hole (30A in FIG. 2) in the sealing plug.

With regard to claim 15, the Patent Office asserted that “figure 2 shows that element 30 is folded in an undeployed configuration.” However, claim 15 recites, among other things, that “the external component [is] folded so that one portion of the external component is in contact with another portion of the external component,” “the external component [is] folded between the one hole in the external component and the another hole in the external component,” and “the tissue puncture sealing device is in an undeployed configuration.” The depiction of the Nash et al. device in figure 2 does not show the external component folded so that one portion of the external component is in contact with another portion of the external component as required by claim 15. Furthermore, figure 2 also does not show the Nash et al. device in an undeployed configuration. Nash et al. makes it clear that when the device is in an undeployed configuration (e.g., figure 1 of Nash et al.) the sealing plug 30 is “straightened” so that it is not folded between any of the holes in the sealing plug. See Nash et al., col. 5, lines 6-10 (explaining that the sealing plug is “straightened and compressed transversely to its longitudinal axis when it is loaded in the carrier tube”).

Claims 15 and 47 have been amended to recite, among other things, that the “filament only passes once through each one of the one hole and the another hole,” which is not identically shown in Nash et al. As shown in figure 2 of Nash et al., the filament travels more than once through the holes 30A, 30B, and 30C in the sealing plug 30. Furthermore, contrary to the assertions made in the Office Action, the locking member 36 cannot be the external component recited in claim 15 because the locking member 36 is not folded in the manner recited in claim 15. Also, the locking member 36 cannot be the sealing plug recited in claim 47 because claim 47 recites that the sealing plug is compressible and the locking member 36 is not compressible.

For the above reasons, Applicants respectfully submit that independent claims 1, 15, and 47 and the claims which are dependent thereon are not anticipated by the cited reference and are patentable.

Independent Claim 28 in view of Rousseau

On page 3 of the Office Action, independent claim 28 was rejected under 35 U.S.C. § 102(b) as being unpatentable over Rousseau. Applicants respectfully traverse the rejection. Rousseau does not identically disclose the subject matter recited in independent claim 28.

Claim 28, as amended, recites, among other things, a “sealing plug” “including a first plurality of openings and a second plurality of openings” wherein “the filament passes through at least two openings from the first plurality of openings, through the anchor, and back through at least two openings from the second plurality of openings” and wherein “the tissue puncture sealing device is configured so that when the anchor and the sealing plug are deployed a tension force applied to the filament compresses the sealing plug and moves the sealing plug toward the anchor.” The device shown in Rousseau does not meet these limitations. In the Office Action, the Patent Office asserted that the sheet 26 in Rousseau is part of the sealing plug. However, as shown in figures 3-4 of Rousseau, the sheet 26 does not compress when a tension force is applied to the filament as recited in claim 28. Therefore, the sheet 26 does not qualify as the sealing plug. Although the upper conical member does compress when a tension force is applied to the filament, the filament in Rousseau only extends through a single opening in the sealing plug (the upper conical member 14 is the sealing plug according to the Patent Office’s interpretation), through the anchor (the lower conical member 14 is the anchor according to the Patent Office’s interpretation), and back through a single opening in the upper conical member 14. Thus, the filament does not pass through at least two openings in the sealing member before passing through the anchor, and the filament does not pass through at least two openings in the sealing plug after passing through the anchor (see FIG. 1 of Rousseau) as required by claim 28.

For the above reasons, Applicants respectfully submit that independent claim 28 is not anticipated by the cited reference and is patentable.

Independent Claim 43 in view of Thal

On page 4 of the Office Action, independent claim 43 was rejected under 35 U.S.C. § 102(b) as being unpatentable over U.S. Patent No. 5,720,765 (Thal). Applicants respectfully traverse the rejection. Thal does not identically disclose the subject matter recited in independent claim 43.

Claim 43, as amended, recites, among other things, a “sealing plug that is compressible” and “the sealing plug being configured to compress when a tension force is applied to the filament.” The stop means 54 in Thal do not compress when a tension force is applied to the filament. Accordingly, Applicants respectfully submit that independent claim 43 is not anticipated by the cited reference and is patentable.

Independent Claims 15 and 31 in view of Kensey et al.

On page 4 of the Office Action, independent claims 15 and 31 and various dependent claims were rejected under 35 U.S.C. § 102(b) as being unpatentable over U.S. Patent No. 5,545,178 (Kensey et al.). Applicants respectfully traverse the rejection with respect to claim 15. Kensey et al. does not identically disclose the subject matter recited in independent claims 15 or 31.

Claim 15, as amended, recites, among other things, that the “filament only passes once through each one of the one hole and the another hole,” which is not identically shown in Kensey et al. The device shown in Kensey et al. does not meet these limitations. As shown in figures 6-7 of Kensey et al., the filament travels more than once through the holes 48 and 50 in the sealing member 36.

Claim 31 recites, among other things, an “anchor disposed outside of the carrier tube at the first end thereof” and a “sealing plug disposed inside the carrier tube at the first end thereof” wherein the “tissue puncture closure device is in an undeployed configuration where the tissue puncture closure device is not inserted into a patient.” The device shown in Kensey et al. does not meet these limitations. When the device shown in Kensey et al. is in an undeployed

configuration, the anchor is not outside the carrier tube as required by claim 31. As shown in figure 1 of Kensey et al., the anchor 38 and the sealing member 36 are both inside the carrier tube when the device is in an undeployed configuration.

For the above reasons, Applicants respectfully submit that independent claims 15 and 31 and the claims which are dependent thereon are not anticipated by the cited reference and are patentable.

Independent Claims 31 in view of Akerfeldt et al.

On page 5 of the Office Action, independent claim 31 was rejected under 35 U.S.C. § 102(e) as being unpatentable over U.S. Patent No. 6,508,828 (Akerfeldt et al.). Applicants respectfully traverse the rejection. Akerfeldt et al. does not identically disclose the subject matter recited in independent claim 31.

Claim 31, as amended, recites, among other things, an “anchor disposed outside of the carrier tube at the first end thereof” and a “sealing plug disposed inside the carrier tube at the first end thereof” wherein the “tissue puncture closure device is in an undeployed configuration where the tissue puncture closure device is not inserted into a patient.” The device shown in Akerfeldt et al. does not meet these limitations. When the device in Akerfeldt et al. is in an undeployed configuration, the sealing plug is not in the carrier tube as required by claim 31 (i.e., both of the sealing plug and the anchor are outside of the carrier tube). Even assuming that the introducer 24 shown in figure 8 of Akerfeldt et al. could be interpreted to be the carrier tube, the device of Akerfeldt et al. still does not meet the limitations recited in claim 31 because the anchor is not positioned outside of the carrier tube (in this case, both the anchor and the sealing plug are inside the carrier tube). Also, the configuration of the device shown in figure 11 of Akerfeldt et al. does not meet the limitations of claim 31 because the device is not in an undeployed configuration as recited in claim 31.

For the above reasons, Applicants respectfully submit that independent claim 31 is not anticipated by the cited reference and are patentable.

Claim Rejections – 35 U.S.C. § 103(a)***Independent Claim 25 in view of Schmieding***

On page 6 of the Office Action, independent claim 25 was rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,027,523 (Schmieding). Applicants respectfully traverse the rejection. Schmieding does not disclose, teach, or suggest the subject matter recited in independent claim 25.

Claim 25, as amended, recites, among other things, that the “tissue puncture sealing device is configured so that applying a tension force to the filament moves the anchor and the sealing plug together.” Applying a tension force to the filament of Schmieding does not result in moving the anchor and the retaining means together. Accordingly, Schmieding does not disclose all of the limitations recited in independent claim 25.

Applicants respectfully submit that the subject matter recited in independent claim 25, considered as a whole, would not have been obvious to a person of skill in the art and are patentable. Accordingly, Applicants request that the Patent Office withdraw the rejection of these claims under 35 U.S.C. § 103(a).

Independent Claims 37, 42, and 45 in view of Akerfeldt et al.

On page 6 of the Office Action, independent claims 37, 42, and 45 and various dependent claims were rejected under 35 U.S.C. § 103(a) as being unpatentable over Akerfeldt et al. Applicants respectfully traverse the rejection. Akerfeldt et al. does not disclose, teach, or suggest the subject matter recited in independent claims 37, 42, or 45.

Claims 37 and 42, as amended, recite, among other things, an “anchor” “positioned outside of the carrier tube” and a “sealing plug” positioned or disposed “inside the carrier tube” when the closure device is in an undeployed configuration. The device shown in Akerfeldt et al. does not meet these limitations. When the device in Akerfeldt et al. is in an undeployed configuration, the sealing plug is not in the carrier tube as required by claims 37 and 42 (i.e., both of the sealing plug and the anchor are outside of the carrier tube). Even assuming that the

introducer 24 shown in figure 8 of Akerfeldt et al. could be interpreted to be the carrier tube, the device of Akerfeldt et al. still does not meet the limitations recited in claims 37 and 42 because the anchor is not positioned outside of the carrier tube (in this case, both the anchor and the sealing plug are inside the carrier tube). Also, the configuration of the device shown in figure 11 of Akerfeldt et al. does not meet the limitations of claims 37 and 42 because the device is not in an undeployed configuration as recited in claims 37 and 42.

Claim 45, as amended, recites, among other things, that “the tissue puncture closure device is configured so that applying a tension force to the filament compresses and holds the sealing plug and the anchor together” The device of Akerfeldt as modified in the manner asserted by the Patent Office does not meet this limitation because applying a tension force to the filament would not compress and hold the sealing plug (18) and the anchor (2) together.

Applicants respectfully submit that the subject matter recited in independent claims 37, 42, and 45 and the claims which are dependent thereon, considered as a whole, would not have been obvious to a person of skill in the art and are patentable. Accordingly, Applicants request that the Patent Office withdraw the rejection of these claims under 35 U.S.C. § 103(a).

New Claims

Applicants have added new claims 53-55.

Allowable Subject Matter

Applicants thank the Examiner for indicating that claims 6, 7, 9-13, 24, 26, 27, 30, 32, and 44 contain allowable subject matter.

* * *

Applicants respectfully submit that the present Application is in condition for allowance. Applicants request reconsideration and allowance of the pending claims. The Examiner is

invited to contact the undersigned by telephone if the Examiner needs anything or if a telephone interview would advance the prosecution of the present application.

Applicants respectfully put the Patent Office and all others on notice that all arguments, representations, and/or amendments contained herein are only applicable to the present patent application and should not be considered when evaluating any other patent or patent application including any patents or patent applications which claim priority to this patent application and/or any patents or patent applications to which priority is claimed by this patent application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 08-2623. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 08-2623.

Respectfully submitted,

Date 10 August 2007

By /Scott C. Nielson/

Scott C. Nielson
Registration No. 50,755